

MANAGEMENT STRATEGY

FOR

WHITE SANDS NATIONAL MONUMENT

ALAMOGORDO, NEW MEXICO

JUNE 2009



NPS Photo by David Bustos, sculptural dune field at White Sands National Monument.

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NPS Photo by David Bustos, scenic view of the shifting dune fields.

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Components of the Management Strategy Document

The National Park Service (NPS) requires that each park unit identify its most significant characteristics and to maintain a General Management Plan (MP06 2.3.1). This Management Strategy Document (MSD) is a step in the planning process toward creation of a General Management Plan. The MSD is a formal description of the unit's core mission and serves as a strategy to support planning and management. The document is grounded in the unit's legislation and developed from knowledge acquired since the unit was originally established. In addition, NPS staff and public stakeholders provide information that guides the understanding of what is significant about the park. The MSD provides a shared awareness of what is most important about the park. Components of the MSD for the White Sands National Monument (WSNM) are described below.

Introduction

This section provides a brief overview of the monument context, history, past planning, and documentation efforts.

Purpose Statement

The purpose statement identifies the specific reason(s) for establishing a particular park as a unit of the NPS. The purpose of the park is based on an analysis of the unit's legislation, legislative history and what they signify for the specific park.

Significance Statements

Significance statements define what is most important about the park's natural and cultural resources and values. Steered by legislation and knowledge acquired through management practices, research, and NPS staff and stakeholder involvement, the statements of significance are used to guide planning and management decisions.

Areas of Focus

Each statement of significance for WSNM is addressed in this section of the document, with emphasis on the 1) fundamental resources and values, 2) primary interpretive themes, and 3) recommendations related to each area of focus.

Fundamental Resources and Values

Fundamental resources and values are considered the most noteworthy concepts to be communicated to the public about a park. They merit primary consideration during planning because they are considered essential for achieving the park's purpose and maintaining the park's significance.

Primary Interpretive Themes

Primary interpretive themes are based upon park purpose and significance and relate park resources to relevant concepts, beliefs, and values. They are intended to increase visitor understanding and appreciation of the park's resources and provide the foundation on which the park's educational and interpretive programs are based.

Recommendations

Review of monument-related literature and discussions with NPS staff and public stakeholders aid in the assessment of concerns, needs, and opportunities associated with the various fundamental resources and values for a park. From this process, recommendations are made for future planning efforts and are included in this section of the MSD document. A summary list of all recommendations made is provided in Appendix D.

Participants

This section includes a list of stakeholders and staff that provided input for the document.

Appendices

These include relevant supporting documents, including legislation, stakeholder results, and summary of stakeholder recommendations.



NPS Photo by David Bustos, flora adapted to the harsh and continually changing dune field.

Introduction

Location and Description of White Sands National Monument

White Sands National Monument is located in Otero and Doña Ana Counties, fifteen miles southwest of Alamogordo, New Mexico. The monument was established by executive proclamation of President Herbert Hoover on January 18, 1933, to preserve the most significant portion of the world's largest gypsum dune field. The monument is one of more than 390 units of the National Park System. With 438,511 visitors in 2008, WSNM is the most visited national park site in New Mexico. It is also the largest NPS area in New Mexico, protecting 143,733 acres.

The monument is situated at the northern end of the Chihuahuan Desert in the Tularosa Basin and is surrounded by several mountain ranges, including the Organ, Sacramento, and San Andres. The brilliant white gypsum dunes of White Sands cover 275 square miles of desert and rise up to 60 feet in some places, shifting as much as 30 feet annually. In 2006, the Department of the Interior and the National Commission for Natural Protected Areas of Mexico (CONAP) established White Sands National Monument (WSNM) and Cuatrociénegas Area de Protección de Flora y Fauna as international sister parks. Both areas contain significant gypsum dune formations and unique endemic species, functioning as islands in a sea of desert. WSNM protects approximately 40% of the dune field in the park, with the remaining areas on lands managed by the U.S. military. Most geological processes occur over millions of years, but the extensive process of how gypsum sand is formed into dunes, and the subsequent movement of the dunes, can be seen when visiting WSNM.

The beauty of these amazing pure white gypsum dune fields are incomparable and spectacular, but perhaps even more extraordinary is the unique and amazing endemic species they support. These areas provide a refuge for many unique plants and animals that have been able to rapidly

adapt by taking advantage of these unique and often harsh environments. White Sands and its sister park are known internationally to be important biologically rich areas. In particular, there are some 75 endemic species in Cuatrociénegas, and some 25 in White Sands National Monument. Thus, understanding where and why these areas are important for sustaining and producing species endemic to these desert islands is a critical issue.

Besides the dunes, no other natural resource issue is more important to White Sands than its water resources. An extremely high aquifer provides moisture for the dunes and prevents them from drying and blowing away. Research conducted on the dunes has shown that when the gypsum sand dries it blows away exponentially with a given velocity of wind. It is known that the dunes rest on a perched water table located only two feet beneath the dunes. It is unknown, however, what the source of the water is. It is thought that the water source could be from rain, an underground spring from a deeper aquifer, Lake Lucero, a perennial stream that runs into the dunes and disappears, or any combination of the four. A host of endemic and state listed endangered species depend on the water resources of White Sands for survival. Currently there is a lack of understanding of the perched aquifer and its interactions within the regional watershed. This lack of understanding about the influence of hydrologic interactions decreases the park's ability to identify and protect processes that contribute to the dynamic formation of the dune field and the stabilization of this unique gypsum ecosystem. Issues such as these underscore the need for continuing support of research efforts within the park.

On-site structures at the park provide several noteworthy NPS architectural works. The development of the monument visitor facilities occurred during the Depression and the Master Plan for the site layout and development was finalized in 1936. Built between 1936 and 1940, the visitor center, maintenance area, and housing buildings are significant as examples of NPS stylistic architectural development prior to WWII and as examples of public works projects. In 1988, 10 structures were added to the National Register of Historic Places as the White Sands

Historic District. The historic district contains eight administrative, visitor and service structures that are examples of the Pueblo Revival Style. The buildings were designed by NPS architects, Lyle E. Bennett and Robert Albers. Landscape architect Charles Richey directed the landscape plans and building layout with the assistance of Frank Kittredge and W.G. Atwell. The entire complex was designed to blend in with the environment and visual impact was minimized through the use of native plantings.

Numerous sites containing archeological and cultural artifacts are present within the monument boundaries, including two Puebloan village sites, numerous campfire hearth sites, portions of historic trails, and several historic ranch sites. Archeological reconnaissance of the area has found evidence of human use spanning approximately 10,000 years. The first atomic bomb was detonated nearby at the Trinity Site on White Sands Missile Range (WSMR), 60 miles north of the national monument.

White Sands National Monument is primarily a day-use area, with camping provided by permit and restricted to ten primitive back country campgrounds. During the hot summer months, most visitor activity takes place in the early morning and evening. The park has picnic sites with accommodations for barbequing and opportunities for sledding in the heart of the dunes. Hiking opportunities include the Alkali Flats Trail, a 5-mile loop; the Dune Life Nature Trail, a 1-mile interpretive trail; and a short accessible boardwalk trail. Visitors may purchase souvenirs, jewelry, and simple pre-packaged food and beverages from a gift store at the visitor center. Finally, the striking scenic landscape attracts relatively frequent use by the commercial filming industry.

Southern central New Mexico has a relatively low population and is an ideal arid climate for aerospace activity, which has attracted the United States military to the area. WSNM is surrounded by WSMR. Holloman Air Force Base (HAFB) is adjacent to the northeast, and is

under contract to provide fire protection, refuse collection and disposal, and water supply. Neighboring military lands place restrictions on activity within the park through frequent closures of the monument for missile testing. Conversely, the lack of development on surrounding military lands has preserved the wide open space and spectacular viewsheds and has also helped protect the natural and cultural resources of the park. Cooperation between the park and its military partners is imperative. Additionally, a U.S. Border Patrol highway checkpoint is located just ½-mile from the park's only visitor entrance. The park routinely cooperates with Border Patrol on various operations.



NPS Photo by David Bustos, aerial view of main drive into the Heart of the Dunes and the Visitor Center at WSNM.

Summary of Legislative History/ Establishment of WSNM

The primary purpose of the monument is to preserve and protect the most impressive portion of the world's largest gypsum dune field. A related purpose of the monument is to preserve all cultural and natural resources, historic structures and wildlife. Pertinent legislation comprises:

January 18, 1933

White Sands National Monument established by Herbert Hoover, President of the United States of America, with Presidential Proclamation No. 2025 (47 Stat. 2551).

November 28, 1934

Boundaries enlarged by Presidential Proclamation No. 2108 (49 Stat. 3426).

August 29, 1938

Boundaries modified by Presidential Proclamation No. 2295, eliminate all sections included in the right-of-way for United States Highway Route 70 (53 Stat. 2465).

June 6, 1942

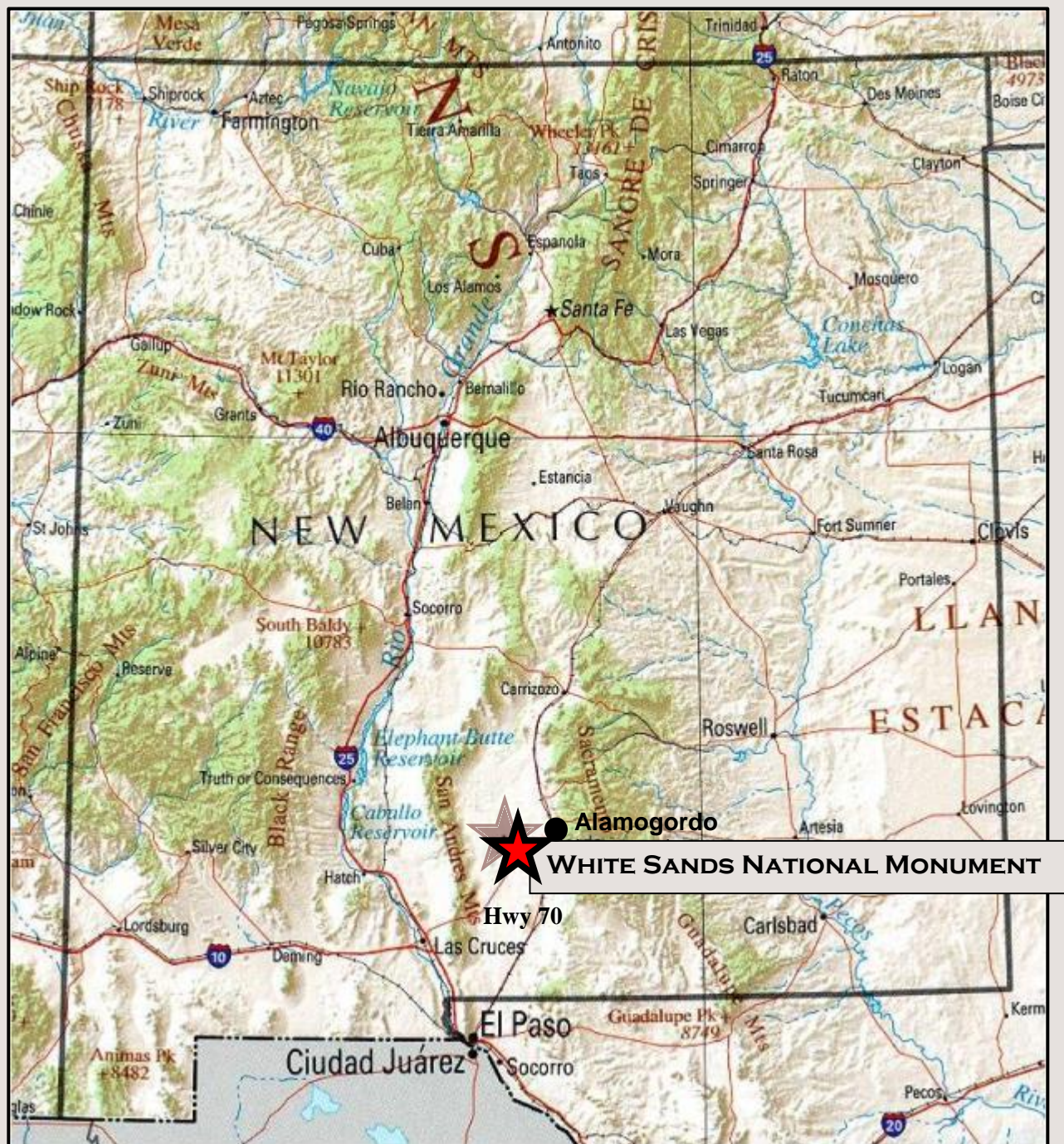
Former White Sands Recreational Demonstration Project added to the monument (56 Stat. 327).

June 27, 1953 Public lands added to the monument. Presidential Proclamation No. 3024 (18 F.R.3683).

November 10, 1978 Monument boundaries adjusted by adding certain lands and deleting others (92 Stat. 3467).

September 28, 1996 Monument boundaries adjusted by adding certain lands and deleting others (110 Stat. 2803).

Regional Map



<http://www.lib.utexas.edu>

Past Planning and Documentation Efforts

1976	Final Master Plan
1987	Statement for Management White Sands National Monument
1991	Proposed Interpretive Prospectus for White Sands National Monument
1994	Resource Management Plan for White Sands National Monument
1998	Cultural Landscape Inventory
2000	White Sands Business Plan
2005	Cultural Landscape Inventory (Revised)
2007	Core Operations Report



NPS Photo by David Bustos, view of unique natural resources from above (Alkali Flats).



NPS Photo by David Bustos, advancing dune field.

Purpose Statement

White Sands National Monument protects the geologically unique gypsum dune fields, and the flora and fauna living within them, while providing educational, research, and recreational opportunities compatible with the protection of the resources and maintenance of the solitude and silence of the dunes.

Significance Statements

1. White Sands National Monument protects the world's largest gypsum dune field, including Alkali Flats and Lake Lucero, the sources of the gypsum. These areas are continually forming geologically unique gypsum dune fields of impressive wilderness beauty.
2. White Sands National Monument protects the biological richness of the flora and fauna living within the dune fields and adjacent desert scrub communities of the Chihuahuan Desert. The brilliant white dune field, appearing as an island in the midst of the Chihuahuan Desert, has resulted in extremely rapid adaptations in wildlife, resulting in approximately 25 endemic species.
3. White Sands National Monument protects numerous historic and prehistoric archeological sites that provide evidence of 10, 000 years of human history and inhabitation.
4. White Sands National Monument supports scientific efforts, allowing research and education relating to the natural and cultural resources within the dune fields and adjacent desert scrub communities of the Chihuahuan Desert.
5. White Sands National Monument provides a spectacular location for outdoor recreation and for experiencing the uniquely stark landscape of gypsum dunes. Millions of visitors have enjoyed the park over the course of its history, participating in hiking, sledding, picnicking, barbequing, and backcountry camping.
6. White Sands National Monument manages programs which promote cooperation, communication, and partnerships with stakeholders, governmental entities, Native American tribes, educational institutions, nonprofit organizations, and residents of southern New Mexico.

Areas of Focus



NPS Photo by David Bustos, scenic view of dune fields and surrounding mountain ranges.

1. Geologically Unique Gypsum Dune Fields

Significance Statement

White Sands National Monument protects the world's largest gypsum dune field, including Alkali Flats and Lake Lucero, the sources of the gypsum. These areas are continually forming geologically unique gypsum dune fields of impressive wilderness beauty.

Fundamental Resources and Values

- ***Alkali Flats and Lake Lucero***

- The park preserves the critically important Alkali Flats which cover approximately one- third of its area. They are crucial for the formation of selenite crystals which are then eroded by sun and wind and carried by the prevailing winds to form gypsum dune fields.
- The park protects the shallow playa called Lake Lucero, which is located in the southwest corner of the monument and is also crucial for the formation of gypsum dune fields.

- ***Gypsum Dune Fields***

- The park preserves the geologically unique and productive gypsum dune fields, which serve as critical habitat for a variety of desert wildlife, covering approximately one half of the monument area.

- ***Shallow Groundwater***

- Throughout the dunes, groundwater is typically present 6-18 inches below the surface of the dune field. Gypsum moves groundwater upward through the dune through a process called capillary action, so that even at the top of a thirty foot dune, moisture is still present. This exceptionally high level of groundwater serves to preserve the dune field, preventing it from being carried away by wind and rapidly eroding.

Primary Interpretive Theme

White Sands National Monument protects and maintains the critical habitat of the dune fields ensuring opportunities for experiencing dune field wilderness and solitude.

Recommendations

- *Minimize or reduce environmental effects that may impact park resources in order to protect and preserve the park in its current state.*
- *Educate users about how to enjoy and protect the site through interpretive opportunities.*
- *Eliminate activities that threaten or interfere with resource preservation such as Easter activities involving confetti, which results in considerable litter on the dune fields.*



NPS Photo by David Bustos, standing water months after a 20 year flood event.



NPS Photo by David Bustos, claret cup blooming in spring.

2. Richness of Flora and Fauna

Significance Statement

White Sands National Monument protects the biological richness of the flora and fauna living within the dune fields and adjacent desert scrub communities of the Chihuahuan Desert. The brilliant white dune field, appearing as an island in the midst of the Chihuahuan Desert, has led to extremely rapid adaptations in wildlife, resulting in approximately 25 endemic species.

Fundamental Resources and Values

- ***Biological Richness***

- The park preserves the diversity of 230 species of flora and fauna that are uniquely adapted to the harsh desert environment found in the dune fields and adjacent desert communities. The park supports 196 species of birds, 371 species of insects, 39 mammals, and 25 reptiles. Species new to the monument are continually being identified.

- ***Critical Habitat***

- Particular plant species establish in the flat areas between the dunes and are responsible for anchoring outer portions of the dunes from further movement. These species create important microsites, supporting sensitive, cryptobiotic soil crusts and providing habitat for particular fauna found in the park.

- ***Paleontological Sites***

- The park preserves areas of sensitivity where evidence of mammoth prints and camelid fossils has been found.

Primary Interpretive Theme

The park maintains and preserves critical habitat and unique wildlife at the largest gypsum dune field in the world and provides opportunities for the public and scientific community to observe, experience, and understand natural processes that influence flora and fauna populations and their habitats.

Recommendations

- *Encourage biotic-related activities such as Earth Day events, new bird watching opportunities in the Cottonwood groves, and additional activities with flora and fauna focus.*



NPS Photo by David Bustos, hearth mound.

3. Archeological History and Prehistory Sites

Significance Statement

White Sands National Monument protects numerous historic and prehistoric archeological sites that provide evidence of 10,000 years of human history and inhabitation.

Fundamental Resources and Values

- ***Historic and Prehistoric Archeological Sites***

- The park preserves the known human history spanning at least 10,000 years.
- Numerous campfire hearth sites containing hardened gypsum serve as ecological and archeological time capsules for future study.
- Puebloan culture existed between the periods of 800 to 1350, and more recently, Apache camps, early trails between Spanish and Anglo settlements, and several cattle ranches were established in the late 1800's and early 1900's.
- The world's first atomic bomb was detonated 60 miles north of WSNM on the Trinity Site of WSMR, July 16, 1945. Visitors frequently assume the site to be within the national monument.

- ***Facilities and Visitor Services Structures***

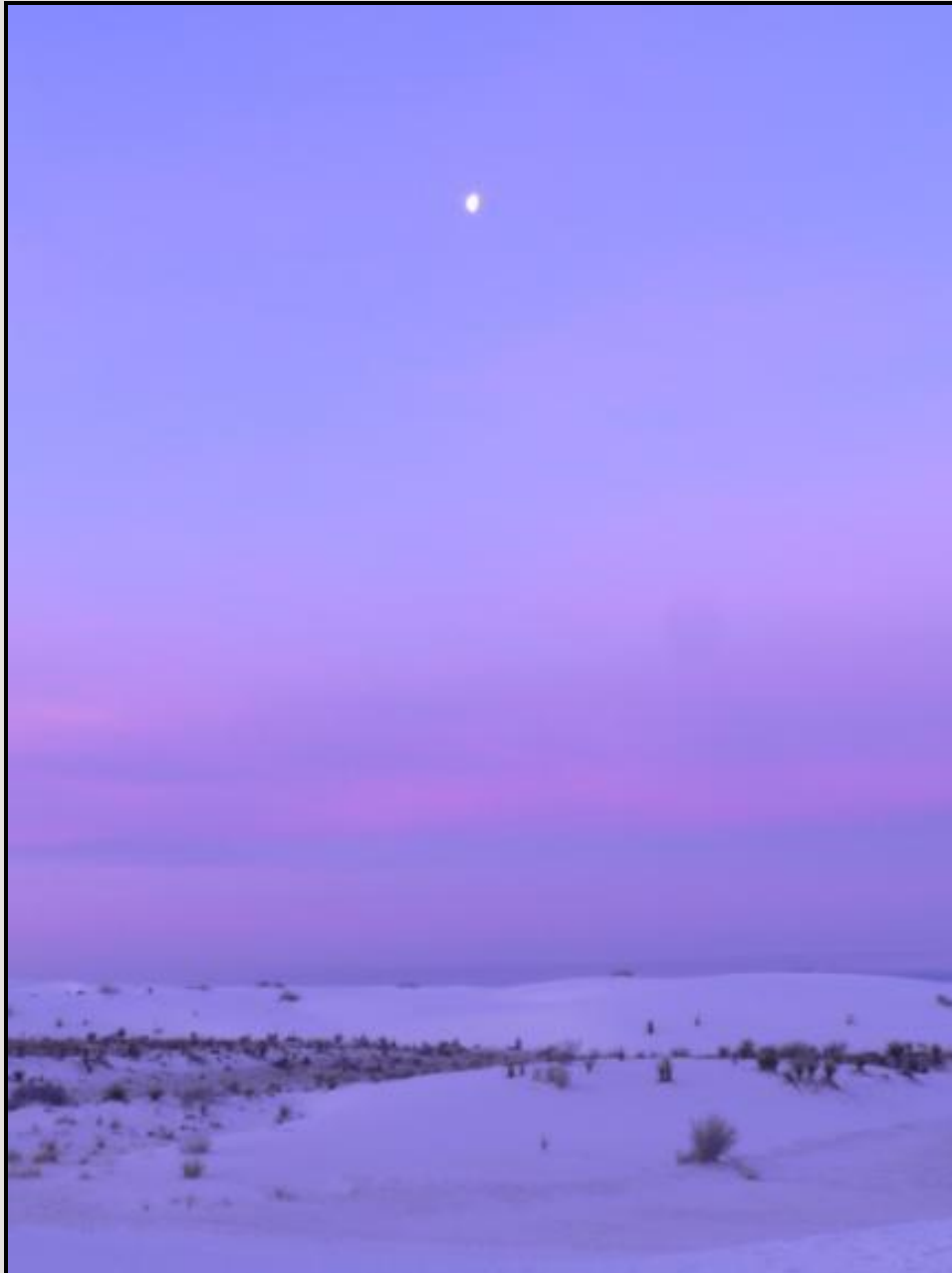
- The park manages and preserves the administrative, visitor and service structures that are examples of the Pueblo Revival Style and are listed on the National Register of Historic Places as the White Sands Historic District.
- The headquarters area was constructed by the WPA (Works Projects Administration).

Primary Interpretive Theme

White Sands National Monument preserves and maintains numerous historic and prehistoric archeological sites that connect the spiritual, cultural and natural history ties between people and places in the park.

Recommendations

- *Provide more opportunities to inform visitors about the cultural resources of the site.*
- *Create historical walking trails through park visitor center and housing focusing on programs interpreting history and architectural features of the site.*



NPS Photo by David Bustos, half moon over dune fields.



NPS Photo by David Bustos, bleached earless lizard.

4. Research and Education

Significance Statement

White Sands National Monument supports scientific efforts, allowing research and education relating to the natural and cultural resources within the dune fields and adjacent desert scrub communities of the Chihuahuan Desert.

Fundamental Resources and Values

- **Research**

- The park actively supports research efforts to advance and expand the scientific knowledge base concerning anthropology, geology, natural history, flora, and fauna with assistance from scientists, researchers, and higher education.

- **Education**

- The park actively supports advancing and expanding educational outreach about the scientific findings relating to anthropology, geology, natural history, flora and fauna to scientists, higher education, school groups, scouts, junior rangers and the general public.

Primary Interpretive Theme

White Sands National Monument is a protected area where opportunities are provided for scientific research and education within the ecologically unique dune fields and adjacent desert scrub communities of the Chihuahuan Desert.

Recommendations

- *Provide outreach to universities by creating research collaborations with WSNM, with emphasis on facilitating outside research on-site and research funding opportunities.*
- *Provide low-cost accommodations for researchers and aid in travel and logistics to remote and difficult-to-access areas of WSNM.*
- *Create opportunities for conferences, workshops and research symposia on-site.*
- *Create educational opportunities to share research findings to visitors on-site.*
- *Expand partnerships with children-related associations to enhance visitor experiences.*

Recommendations continued

- *Provide outreach to school districts, including creation of activities that complement curriculum learning objectives.*
- *Create more learning opportunities during school field trips.*
- *Coordinate grade-level learning with schools through park-based and online learning.*
- *Create a mobile display for community and school events to heighten interest about the park.*
- *Provide more opportunities for learning through junior ranger opportunities.*
- *Create a local initiative to visit the park by providing free passes for children with good grades and/or school attendance.*



NPS Photo by Matt Gode, prairie rattlesnake.



NPS Photo by David Bustos, overhead view of dune field.

5. Visitor Experience

Significance Statement

White Sands National Monument provides a spectacular location for outdoor recreation and for experiencing the uniquely stark landscape of gypsum dunes. Millions of visitors have enjoyed the park over the course of its history, participating in hiking, sledding, picnicking, barbequing, and backcountry camping.

Fundamental Resources and Values

- ***Visitor Participation and Opportunities***

- Ranger-led activities include nightly sunset stroll nature walks in the dunes, a boardwalk tour over the dunes, patio talks, evening programs at the outdoor amphitheater, and monthly tours of Lake Lucero, the dry lake bed (playa) that is the source of the gypsum sand dunes.

- ***Recreational Opportunities***

- The park provides designated areas for sledding on the dunes, picnicking and barbecuing facilities, and hiking.
- Numerous special events and evening events are offered.

Primary Interpretive Theme

The monument provides a range of opportunities for visitors to understand the natural processes that influence the unique ecosystems and available recreational opportunities, from the solitude of a trail through the natural ecosystem to a structured event at the visitor center.

Recommendations

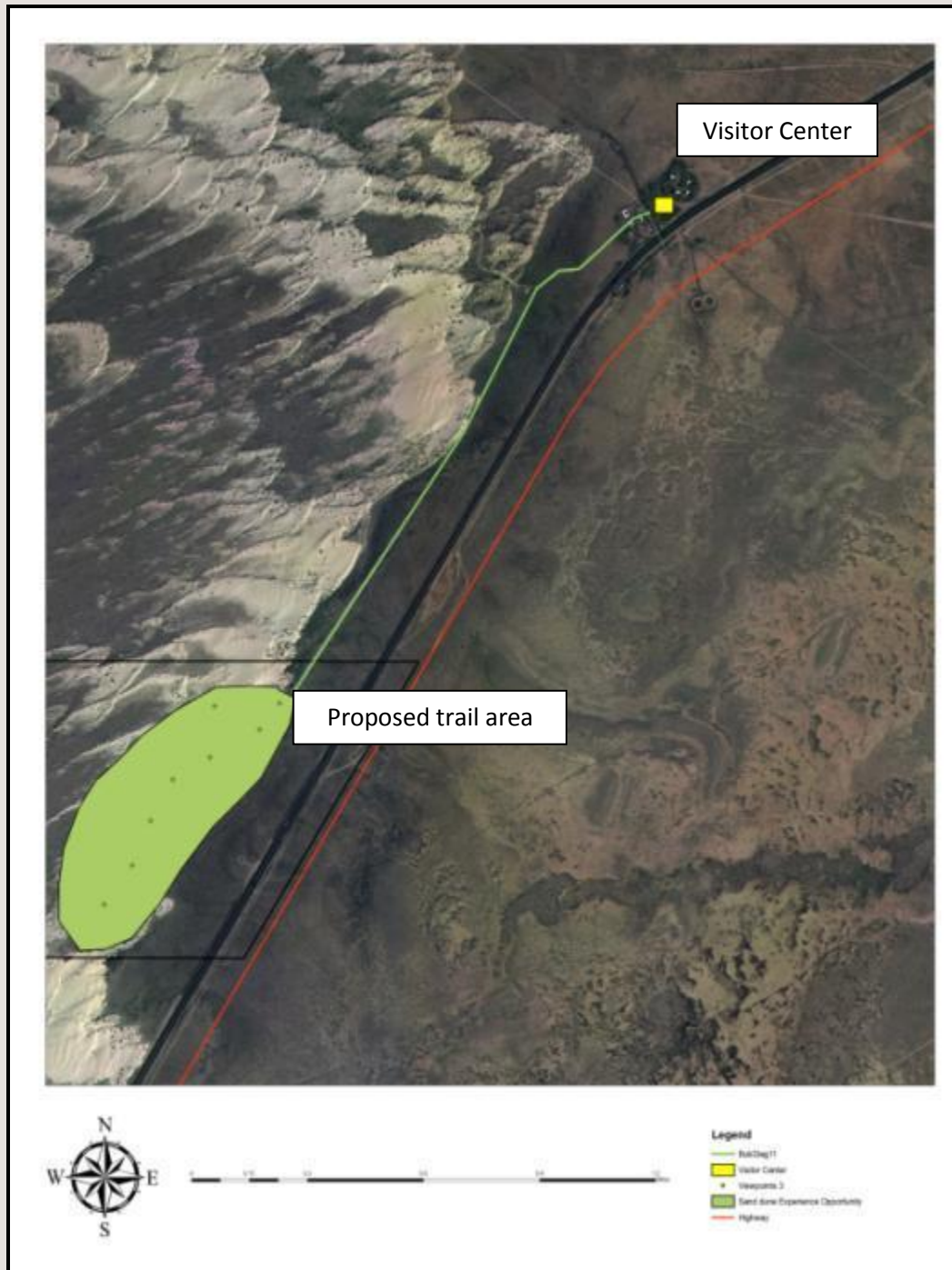
- *Maintain the following facilities and activities noted as effective by stakeholders: the visitor center, large group recreation areas, parking, boardwalk, sunset strolls, full moon bike rides, dune sledding, Christmas Luminaria Event, star parties, and camping opportunities.*
- *Maintain buildings in good repair and utilize more sustainable practices on-site.*
- *Convert store room space near gift shop to visitor use; this space is perceived as being underused and may be better used as space for additional commercial visitor services.*
- *Provide opportunities in the visitor center that focus on immersion or interacting with displays rather than viewing.*

Recommendations continued

- *Increase awareness of visitor center and gift shop by providing greater orientation of these areas to visitors.*
- *Develop more opportunities to purchase food on-site and provide mobile vendors in dune fields during special events.*
- *Provide more parking or shuttle service during special events.*
- *Provide additional RV parking.*
- *Allow year-round alcohol consumption within the park.*
- *Provide more interpretive signage inside park, including signs for park hours at main entrance, and increase signage on the approach up to the park.*
- *Develop more interpretive signage in dune field area, including additional areas along the boardwalk.*
- *Increase restroom capacity at the visitor center to accommodate large groups.*
- *Create additional shade adjacent to visitor center.*
- *Provide additional shade in the dunes area.*
- *Create a greater number of large group picnic areas that will accommodate 50 people or more.*
- *Increase number of volunteers and docents available for visitor needs.*
- *Extend park hours, have more free entrance times and reexamine the cost of the entrance fee.*
- *Create additional equestrian trails.*
- *Encourage more special events with potential themes:*
 - *Kite Flight day*
 - *Team- building courses for local businesses*

Recommendations continued

- *Encourage more special events with potential themes (continued):*
 - *Music festivals*
 - *New Mexico Museum of Space History night*
 - *Dawn hikes*
 - *Yoga and similar classes on the dune field*
 - *Photography/filming workshops*
 - *Graphic art events*
- *Explore development of possible biking trails between HAFB and WSNM to provide a recreational and transportation pathway between the two destinations.*
- *Increase visitor experience and relevance among diverse audiences to encourage new users to visit and enjoy the park.*
- *Encourage stronger relationship with Latino population through program development that targets this group and hire Spanish-speaking staff at White Sands.*
- *Provide additional services for park users during missile testing closures by creating other opportunities to interpret and experience the park's significance during these times (see example on following page).*



Proposed trail allows visitors to visit dune fields and the unusual Rio Grande cottonwood habitat. Visiting a dune is currently impossible during times of missile testing when the Dunes Drive is closed to visitors.



NPS Photo by David Bustos, Lake Lucero.

6. Cooperation and Partnering Opportunities

Significance Statement

White Sands National Monument manages programs which promote cooperation, communication, and partnerships with stakeholders, governmental entities, Native American tribes, educational institutions, nonprofit organizations, and residents of southern New Mexico.

Fundamental Resources and Values

- ***Communication and Cooperation***

The park strives to initiate and maintain communication and cooperation with stakeholders, governmental entities, educational institutions and residents of southern New Mexico.

- ***Partnerships***

The park strives to initiate and maintain crucial partnerships with stakeholders, governmental entities, Native American tribes, nonprofit organizations, educational institutions and residents of southern New Mexico.

Primary Interpretive Theme

White Sands National Monument cooperates and communicates in ways to maximize partnering opportunities and communication efforts with key stakeholders in southern New Mexico.

Recommendations

- *Continue overall effective communication, relationships and cooperation with stakeholders (as noted through stakeholder input) at WSNM.*
- *Communicate information more effectively regarding RV parking and camping for scout groups and activities and volunteer activities available for visitors at WSNM.*
- *Provide activities and opportunities that will attract local residents to WSNM on a more regular basis.*
- *Meet with stakeholders on a regular basis. Staff members of WSNM are encouraged to attend meetings conducted by key stakeholders.*
- *Disseminate information about WSNM at new recruit orientations at HAFB and WSMR.*

Recommendations continued

- *WSNM and WSMR collaborations should strive to:*
 - *Increase communication links with the Base Garrison.*
 - *Reestablish recovery protocol for unexploded ordinance.*
 - *Coordinate schedule for monument closures.*
- *Advertise WSNM events and opportunities more effectively:*
 - *Create a permanent column in Alamogordo newspaper (the Alamogordo newspaper does currently promote some events).*
 - *List events in local military base newspapers.*
 - *Post events on military base electronic information boards.*
 - *Advertise with flyers or notices.*
 - *Provide basic flyers for hotels.*
 - *Participate in Chamber of Commerce announcement of events in the “Chamber Chat”.*
 - *Establish a “Friends of WSNM” to provide additional support for the monument.*
- *Expand upon existing partnerships with:*
 - *HAFB and Raptor Lake: recreation, camping, and birding opportunities.*
 - *Asombro Institute.*
 - *New Mexico Museum of Space History: space camp, rocket events, and creation of an astronomy club sponsor.*
 - *Border Patrol and Otero County’s Sheriff’s Department: joint training and/or search and rescue missions.*
 - *WSMR: possibly realign the mutual boundary, benefiting both agencies.*
 - *Cuatrociénegas Park in Mexico, considered the sister park to WSNM.*

Participants

Alamogordo Chamber of Commerce

Mike Espiritu, Executive Director

Alamogordo City Commission

Steve Brockett, Mayor

Alamogordo Public Meeting

Lisa Banister, White Sands Trading

Don Harper

Victoria A. Hazzard

Claire Jenson

Samantha Jensen

Jerry Johnson

Journalist (did not identify affiliation)

Journalist (did not identify affiliation)

Eric Metzler

Jennifer Milne, White Sands Trading

Tim Smith

Holloman Air Force Base Focus Group

Aaron Clayton

Latricia Kirk

SRA Frances Saucedo

SSgt Aaron Smith

TamRah Thomas

MSgt Wayne Wooldridge

Participants continued

National Park Service staff (not associated with WSNM)

Larry Norris, Southwest Research Coordinator, Desert Southwest CESU

New Mexico Museum of Space History

Randall Hayes, Director

New Mexico State University

Stan Carlson, Math, Engineering, Science and Health Division Head

Cheri Jimeno, President NMSU – Alamogordo

Otero County Commission

Clarissa McGinn, Commissioner

Doug Moore, Vice Chairman

Ronnie Rardin, Chairman

And public attendees

Otero County Film Liaison

K. Jan Wafful

Otero County Sheriff's Department

John Blansett, Sheriff

Leon Ledbetter, Captain

Norbert Sanchez, Undersheriff

Researchers

Mary Lucero, USDA-ARS Jornada Experimental Range

Eric H. Metzler, Principal Investigator, Eric H. Metzler Research Associates

Gary Roemer, Associate Professor, Dept. of Fish, Wildlife and Conservation

Ecology, New Mexico State University, Las Cruces

Anna Szykiewicz, Postdoctoral Fellow, Indiana University, Dept. of Geol. Sciences

Participants continued

United States Border Patrol

Steven A. Higgs, Patrol Agent in Charge, Alamogordo Station, and staff

Western National Parks Association

Anette Dunshee, Manager

White Sands Missile Range

Frank A. Chavez, Executive Director, White Sands Test Center

Ron Hickok, Deputy to the Garrison Commander, and Staff

Vicki Reynolds, Director of Range Operations

White Sands Trading Company

Shane Ortega, President of National Park Concessions

White Sands National Monument Staff

David Bustos, Chief of Natural and Cultural Resource Management

Tito Doporto, Equipment Operator

Rusty Jensen, Chief Ranger

John Mangimeli, Chief of Interpretation

Ray Monclova, Maintenance Mechanic

Gary Moravec, Administrative Technician

Kevin Schneider, Superintendent

Don Tyree, Facility Manager

Pat Waggy, Visitor Use Assistant

Alexander Whitten, Law Enforcement Park Ranger

Work Cited

www.lib.utexas.edu.

Appendix A: Relevant Legislation

80. White Sands National Monument

Establishment: Proclamation (No.2025) of January 18, 1933.....

Boundaries enlarged: Proclamation (No. 2108) of November 28. 1934.....

Excluding certain property: Proclamation (No. 2295) of August 29, 1938.....

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 2025—Jan. 18, 1933—47 Stat. 2551]

Whereas it appears that the public interest would be promoted by including the lands hereinafter described within a national monument for the preservation of the white sands and additional features of scenic, scientific, and educational interest;

Now, THEREFORE, I, Herbert Hoover, President of the United States of America, by virtue of the power in me vested by sec. 2 of the act of Congress entitled “An Act For the preservation of American antiquities,” approved June 8, 1906 (34 Stat. 225), do proclaim and establish the White Sands National Monument and that, subject to all valid existing rights, the following described lands in New Mexico be, and the same are hereby, included within the said national monument: [...]

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this monument as provided in the act of Congress entitled “AN ACT To establish a National Park Service, and for other purposes,” approved August 25, 1916 (39 Stat. 535-536), and acts additional thereto or amendatory thereof.

In WITNESS THEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

Appendix A: Relevant Legislation continued

DONE at the City of Washington this 18th day of January, in the year of our Lord nineteen hundred thirty-three, and of the Independence of the United States of America the one hundred and fifty-seventh.

Herbert Hoover

By the President:
Henry L. Stimson
Secretary of State

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 2108—Nov. 28, 1934—19 Stat. 3426]

Whereas it appears that the public interest would be promoted by adding to the White Sands National Monument, New Mexico, certain adjoining lands for administrative purposes:

Now, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, by virtue of and pursuant to the power in me vested by section 2 of the act of June 8, 1906 (ch. 3060, 34 Stat. 225; U.S.C., title 16, sec. 431), do proclaim that, subject to all valid existing rights, the following-described land in New Mexico be, and it is hereby, reserved, and added to and made part of the White Sands National Monument:

NEW MEXICO PRINCIPAL MERIDIAN

T. 18 S., R. 8 E., sec. 6, NW1/4, 158.91 acres.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, deface, or remove any feature of this monument and not to locate or settle upon any of the lands reserved by this proclamation.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this monument as provided in the act of Congress entitled “An Act To establish a National Park Service, and for other purposes”, approved August 25, 1916 (ch. 408, 39 Stat. 535; U.S.C., title 16, secs. 1 and 2), and acts additional thereto or amendatory thereof.

Appendix A: Relevant Legislation continued

In WITNESS THEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 28th day of November, in the year of our Lord Nineteen hundred and thirty-four, and of the Independence of the United States of America the one hundred and fifty-ninth.

Franklin D. Roosevelt.

By the President:
Cordell Hull
Secretary of State

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 2295—Aug. 29, 1938—53 Stat. 2465]

WHEREAS it appears that certain sections of the right-of-way for United States Highway Route 70 are included within the White Sands National Monument in the state of New Mexico, established by Proclamation No. 2025 of January 18, 1933, and enlarged by Proclamation No. 2108 of November 28, 1934; and

WHEREAS it appears that it would be in the public interest to exclude from the said monument such sections of the road right-of-way:

NOW, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, ch. 3060, 34 Stat. 225 (U.S.C., title 16, sec. 431), do proclaim that the White Sands National Monument in the State of New Mexico is hereby modified by eliminating there from all sections now included therein of the right-of-way for the United States Highway Route 70.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 29 day of August in the year of our Lord one thousand nine hundred and thirty-eight, and of the Independence of the United States of America the one hundred and sixty-third.

Franklin D. Roosevelt.

By the President:
Cordell Hull
The Secretary of State

Appendix A: Relevant Legislation continued

25. White Sands National Monument

White Sands Recreational Development Demonstration Project, addition to monument.....Excerpt from Act of June 6, 1942

Excerpt from "An Act to authorize the disposition of recreational demonstration projects, and for other purposes," approved June 6, 1942 (56 Stat. 327)

SEC. 2. From and after the date of this Act, the lands acquired for the Acadia, French Creek, Shenandoah, and White Sands recreational demonstration projects shall be added to and become a part of Acadia National Park, Hopewell Village National Historic Site, Shenandoah National Park, and White Sands National Monument, in the order named above, subject to all laws, rules, and regulations applicable to the respective areas to which such recreational demonstration projects are added: *Provided*, That within six months after the date of this Act the Secretary of the Interior shall file with The National Archives a map of each recreational demonstration project enumerated in this section. (16 U.S.C. sec. 459s.)

White Sands National Monument

No. 3024

June 27, 1953, 18 F. R. 3683

ADDING LANDS TO THE WHITE SANDS NATIONAL MONUMENT

NEW MEXICO

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION

WHEREAS certain lands of the public domain lie within the boundaries of the White Sands National Monument, New Mexico, but are not now a part of the monument; and

WHEREAS it appears that the public interest would be promoted by adding such lands to the said monument in order to preserve the white sands and other features of scenic, scientific, and educational interest located thereon:

NOW, THEREFORE, I, DWIGHT D. EISENHOWER, President of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431), do proclaim that, subject to valid existing rights, the following-described lands in New Mexico are hereby added to and reserved as a part of White Sands National Monument:

Appendix A: Relevant Legislation continued

NEW MEXICO PRINCIPAL MERIDIAN

T. 18 S., R. 8 E.,

Sec. 5, SW $\frac{1}{4}$ NW $\frac{1}{4}$ AND NW $\frac{1}{4}$ SW $\frac{1}{4}$;

Sec. 6, lots 1,2,6, and 7, S $\frac{1}{2}$ NE $\frac{1}{4}$, n $\frac{1}{2}$ SE $\frac{1}{4}$, AND E $\frac{1}{2}$ SW $\frac{1}{4}$.

The areas described aggregate 478.53 acres.

Public Land Order No. 833 of May 21, 1952, reserving the above-described lands, together with other lands in New Mexico, for the use of the Department of the Army for military purposes, is hereby revoked so far as it affects the above-described lands.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, deface, or remove any feature of this monument as hereby enlarged and not to settle upon any of the lands reserved by this proclamation.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of these lands as provided in the act of Congress entitled "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916, 39 Stat. 535 (16 U.S.C. 1-3), and acts supplementary thereto or amendatory thereof.

IN WITNESS THEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this twenty-fourth day of June in the year of our Lord nineteen hundred and fifty-three, and of the Independence of the United States of America the one hundred and seventy-seventh.

Dwight D. Eisenhower

By the President:

John Foster Dulles,

Secretary of State

Appendix A: Relevant Legislation continued

TITLE 43-PUBLIC LANDS: INTERIOR

Chapter I—Bureau of Land Management,
Department of the Interior

Appendix—Public Land Orders
[Public Land Order 703]
NEW MEXICO

WITHDRAWING PUBLIC LANDS FROM PROSPECTING, LOCATING, ENTRY, AND PURCHASE UNDER THE MINING LAWS AND RESERVING THEM FOR THE USE OF THE DEPARTMENT OF THE ARMY FOR MILITARY PURPOSES

By virtue of the authority vested in the President and pursuant to Executive Order No. 9337 of April 24, 1943, it is ordered as follows:

Subject to valid existing rights, the public lands within the following-described areas in New Mexico are hereby withdrawn from prospecting, location, entry, and purchase under the mining laws of the United States and reserved for the use of the Department of the Army for military purposes:

NEW MEXICO PRINCIPAL MERIDIAN

[...]

Oscar L. Chapman,
Secretary of the Interior

MARCH 8, 1951.

[F.R. Doc. 51-3314; Filed, Mar. 14, 1951;
8:45 a.m.]

[Public Land Order 833]
NEW MEXICO

WITHDRAWING PUBLIC LANDS FOR USE OF DEPARTMENT OF THE ARMY FOR MILITARY PURPOSES, AND REVOKING EXECUTIVE ORDERS NOS. 1450 AND 9029 AND PUBLIC LAND ORDERS NOS. 7, 173, AND 703

By virtue of the authority vested in the President and pursuant to Executive Order No. 9337 of April 24, 1943, it is ordered as follows:

Subject to valid existing rights, the public lands in the following-described areas in New Mexico are hereby withdrawn from all forms of appropriation under the public-land laws, including the mining and mineral-leasing laws, and reserved for the use of the Department of the Army for military purposes:

NEW MEXICO MERIDIAN

[...]

Those portions of the following-described subdivisions excepted from the White Sands National Monument by Proclamation No. 2025 of January 18, 1933, and eliminated from that monument by Proclamation No. 2295 August 30, 1938: [...].

Appendix A: Relevant Legislation continued

Those portions of the following-described subdivisions south and east of, and including, Federal Air Project 176 right-of-way, and those portions of United States Highway 70 eliminated from the White Sands National Monument by said proclamation No. 2295: [...]

The areas described, including both public and non-public lands, aggregate approximately 2,394,384 acres.

This order shall take precedence over but not otherwise affect (1) Executive Orders No. 1526 of May 3, 1912, No. 2368 of April 24, 1916, and No. 4266 of July 10, 1925, reserving lands for the use of Department of Agriculture as an Experimental Station; (2) the Executive Orders of July 10, 1919, and April 17, 1926, creating Public Water Reserves Nos. 65 and 107; (3) Executive Order No. 8646 of January 22, 1941, reserving lands for the San Andreas National Wildlife Refuge; and (4) the order of April 8, 1935, of the Secretary of the Interior establishing New Mexico Grazing District No. 4, so far as such orders affect any of the above-described lands.

The use by the Department of the Army of the lands in the San Andreas National Wildlife refuge and Jornada Experimental Range shall be subject to and in conformity with memoranda of agreement or use permits heretofore and hereafter negotiated between the Department of the Army and the interested Federal agencies.

The public lands in the areas described above lying north and west of Highway No. 70 may be used for grazing purposes under the provisions of the act of June 28, 1934, 48 Stat. 1269, as amended by the act of June 26, 1936, 49 Stat. 1976 (43 U.S.C. 315 et seq.) at such time and in such manner as may be agreed upon by the Department of the Interior.

The following orders are hereby revoked:

1. Executive Order No. 1450 of December 29, 1911, reserving public lands for a target range and for other military purposes.
2. Executive Order No. 9029 of January 20, 1942, reserving public lands for the use of the War Department as a general bombing range, as amended by Executive Order No. 9526 of February 28, 1945, and by Public Land Order No. 473 of April 30, 1948.
3. Public Land Order No. 7 of January 29, 1942, reserving public lands for the use of the War Department as an air base, as amended by Executive Order No. 9526 of February 28, 1945, and by Public Land Order No. 473 of April 30, 1948.
4. Public Land Order No. 173 of September 27, 1943, reserving public lands for the use of the War Department for construction of a sewage disposal plant, as amended by Public Land Order No. 473 of April 30, 1948.
5. Public Land Order No. 703 of March 8, 1951, reserving public lands for the use of the department of the Army for military purposes.

It is intended that when the lands described herein are no longer needed for the purpose for which they are reserved they shall be returned to the administration of the Department of the Interior, the Department of Agriculture, and any other Federal agency according to their respective interests of record.

Oscar L. Chapman
Secretary of the Interior.

May 21, 1952.

[F.R. Doc. 52-5828; Filed, May 26, 1952; 8:53 a.m.]

Appendix B: Legislative and Administrative Requirements

All management, planning and development decisions and actions relating to WSNM must comply with the monument's establishment legislation. The following must be considered, among others, in the development and management of WSNM. Highlighted (*italic*) actions pertain to all national parks:

1916, August 25

The National Park Service Organic Act of 1916, (P.L.64-235, Stat. 535) established the NPS and directed it to “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

1933, January 18

White Sands National Monument established by Herbert Hoover, President of the United States of America, with Presidential Proclamation No. 2025 (47 Stat. 2551).

1934, November 28

Boundaries enlarged by Presidential Proclamation No. 2108 (49 Stat. 3426).

1938, August 29

Boundaries modified by Presidential Proclamation No. 2295, eliminating there from all sections now included in the right-of-way for United States Highway Route 70 (53 Stat. 2465).

1942, June 6

Former White Sands Recreational Demonstration Project added to the Monument (56 Stat. 327).

Appendix B: Legislative and Administrative Requirements continued

1952, May 21

By Public Land Order 833, park lands were withdrawn from absolute control of the NPS for military use by the Department of the Army. Proposed developments and use by the NPS are then limited until military needs are concluded.

1953, June 27

Public lands added to the Monument. Presidential Proclamation No. 3024 (18 F.R.3683).

1963, December 23

A 10-year co-use agreement dated with current extensions of this permit, granted by the Department of the Interior to the Department of the Army, allowing continuing use of the western portion of the monument (74,849 acres) by the White Sands Missile Range.

1966

National Historic Preservation Act, as amended (16 USC CFR 470).

1968

Architectural Barriers Act and Section 504, Rehabilitation Act, 1973, as amended.

1969

National Environmental Policy Act (NEPA), (42 USC 12101-12213; P.L. 101-336).

1971, May 13

Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921).

1973

Endangered Species Act.

1974

Archeological and Historic Data Preservation Act (P.L. 93-291; 88 Stat. 174).

Appendix B: Legislative and Administrative Requirements continued

1977

The White Sands Master Special Use Agreement signed by the Secretary of the Interior Andrus, and Secretary of the Army Alexander, recognized White Sands as an area of the NPS but granted the Army the right to conduct technical tests over the monument, with some excluded areas. The Master Special Use Agreement was supplemented by a Memorandum of Understanding between the Superintendent, WSNM, and the Commanding General, White Sands Missile Range. The Memorandum of Understanding is reviewed and updated as necessary each year.

1978, November 10

Monument boundaries adjusted by adding certain lands and deleting others (92 Stat. 3467).

1984, November 28

Boundaries enlarged by Presidential Proclamation No. 2108 (19 Stat. 3426, appended).

1996, September 28

Monument boundaries adjusted by adding certain lands and deleting others (110 Stat. 2803).

2006

Applicable guidance and procedures are also listed by the National Park Service Management Policies.

NPS, DO 12: Environmental Handbook and Conservation Planning, Environmental Impact Analysis and Decision Making.

NPS, DO 2: Park Planning.

Appendix C: Aggregate Stakeholder Input

Rankings indicate frequency of response from stakeholders: Low = 1-4, Medium = 5-8, and High = 9 and above.

TOPICS	STAKEHOLDERS
EFFECTIVE AT WSNM	Response Rankings (Low, Medium, High)
<u>Site Facilities and Opportunities</u>	
Visitor Center	L
Enjoy Undisturbed Site	L
Protect Park, No New Recreation Oppor.	L
Enjoy Silence	L
Biological Richness	L
Picnic Area Nicely Spaced	L
Large Group Areas	L
Parking	L
Boardwalk	L
<u>Programs</u>	
Sunset Strolls	L
Full Moon Bike rides	L
Dune Sledding	L
Christmas Luminaria Event	L
Star Parties	L
Scout Campouts	L
Overnight Campouts	L
<u>Communication/Cooperation</u>	
Good Communication w/ WSNM	H
Good Relationship w/ WSNM	H
Newspaper Announces Events	L
NEEDS IMPROVEMENT AT WSNM	
<u>Site Facilities and Opportunities to Improve or Create</u>	
Orient Visitors to Visitor Center	L
Orient Visitors to Gift Shop	L
Visitor Center	L
<i>Focus on Immersion not Viewing</i>	L
<i>More Ties to Culture and History</i>	L
<i>Focus on Birds, Plants & Animals</i>	L
Tree or Ramada (shade) Outside Visitor Center	L
Boardwalk Needs Interactive/Interpretive Signs	L
Keep Buildings in Good Repair	L
Allow Alcohol Consumption Year Round	L
More Food Available on Site	L
Mobile Food Stations Available During Events	L
More Large Group Areas	L
Better Parking Arrangements for Special Events	L
Better RV Parking	L
More Shade in Dunes Recreation Area	L
Larger Restrooms Near Visitor Center	L
More Interpretive Signs Inside Park	L

Appendix C: Aggregate Stakeholder Input continued

Rankings indicate frequency of response from stakeholders: Low = 1-4, Medium = 5-8, and High = 9 and above.

TOPICS	STAKEHOLDERS
NEEDS IMPROVEMENT AT WSNM	Response Rankings (Low, Medium, High)
<u>Site Facilities and Opportunities to Improve or Create</u>	
Signage for Hours at Main Entrance	L
Better Signage Along Freeway	L
Need More Rangers in Heart of the Dunes and Bookshop	L
Raise Speed Limit on Road	L
Law Enforcement Strict/Unfriendly	L
Need More Volunteers/Docents	L
Update Amphitheater	L
Separate Area for Filming within Park	L
Convert Store Room Space in Gift Shop	L
More Sustainability Practices on Site	L
Separate Area for Passive Recreation and Active Recreation	L
Extend Hours the Park is Open	L
Entrance Fee too High	L
<u>Program Opportunities to Create or Improve</u>	
Biotic Reasons to Visit WSNM	L
Iconic (Kit Fox) Signs Lead Visitors on Site	L
Better Educate WSNM Staff regarding site offerings	L
Birding in Cottonwood Groves	L
"Traveling Minstrel Show"	L
Mobile Building To Reach Passive Users	L
Have More Free Entrance Times	L
Make Klondike Event Permanent	L
Expand Full Moon Events Multiple Days	L
Expand Star Party Events	L
Expand Moonlit Bike Ride Events	L
Kite Flight Day	L
Equestrian Trails	L
Yoga/ Martial Arts Programs	L
Earth Day Event	L
Baatan Death March Event	L
Team Building Courses	L
Music Festival	L
Space Museum Night	L
Reinstate Beach Party Events	L
Dawn Hikes	L
Groups that are More Self Guided	L
Coordinate Grade Level Learning Objectives	L
More Learning w/ School Fieldtrips	M
Educate Users How to Preserve site	L
Free Passes for School Kids with Good Grades/Attendance	L
Allow ATV Riding	L
Phase Out Easter Egg Confetti	L
Events/Increase Visitation Hispanics	L

Appendix C: Aggregate Stakeholder Input continued

Rankings indicate frequency of response from stakeholders: Low = 1-4, Medium = 5-8, and High = 9 and above.

TOPICS	STAKEHOLDERS
NEEDS IMPROVEMENT AT WSNM	Response Rankings (Low, Medium, High)
<u>Partnership Opportunities to Create or Improve</u>	
Raptor Lake Birding Opportunities	L
Raptor Lake Camping Opportunities	L
Outreach to Universities and Schools	M
Research	
<i>Provide Foundation for Management</i>	L
<i>Provide Foundation for Interpretation</i>	L
<i>Provide Foundation for Policy Development</i>	L
<i>Provide Foundation for Public Outreach</i>	L
<i>Conference/ Workshop</i>	L
<i>Research Symposia</i>	L
<i>Funding for Outside Research</i>	M
<i>Universities More Involved</i>	L
<i>NPS to Make Research Practices Easier to Approve/ Conduct</i>	L
<i>Travel to Remote Areas Difficult</i>	L
<i>Science</i>	L
<i>Archeology</i>	L
<i>Geology</i>	L
<i>Wildlife</i>	L
<i>Use Findings on Site</i>	L
Filming/Photography	M
Graphic Art	L
Joint Training/SAR Missions	L
Allow ATV's for SAR Missions	L
Asombro Institute	L
Partnering w/ Space Museum Events/Spacecamp/Science projects	L
Astronomy Club Sponsor Events	L
Realign Boundary w/ WSMR	L
Cultural Resource Opportunities	L
Partnering with Star Party Events	L
<u>Communication/Cooperation Improvements or Additions</u>	
Little or no Communication w/ WSNM	L
Little or no Relationship w/ WSNM	L
"Revitalize Locals" to Visit WSNM	L
RV Parking and Camping Information	L
What Activities are Available at WSNM?	L
Who can Volunteer at WSNM?	L
Exchange Phone/Email Information	M
Lunch/Meet Together on Regular Basis	L
Have WSNM Attend Meetings	L
WSNM Information at New Recruit Orientation	L
Coordinate Base Closures with WSNM	L
Have WSNM and WSMR Scheduler Meet	L

Appendix C: Aggregate Stakeholder Input continued

Rankings indicate frequency of response from stakeholders: Low = 1-4, Medium = 5-8, and High = 9 and above.

TOPICS	STAKEHOLDERS
NEEDS IMPROVEMENT AT WSNM	Response Rankings (Low, Medium, High)
<u>Communication/Cooperation Improvements or Additions</u>	
Permanent Column in Newspaper	L
Events in all Base Newspapers	L
Events on Base Electronic Boards	L
Advertise with Flyers/Notices	L
Basic Flyers for Hotels w/ Events	L
Basic Flyers for Base w/ Events	L
Chamber Chat Announce Events	L
<u>Fund Raising Opportunities</u>	
Photography	L
WS Invitational (Auction Artwork)	L
Astronomy/Art/Landscape Opportunities	L
Friends of the Park	L
<u>Other</u>	
Preserve Park History including Administrative History	L
Low-Cost Accommodation for Researchers	L
Opportunity to Interpret Site During Missile Testing Closures	L

Appendix D: Summary of Recommendations

Areas of Focus

1. Geologically Unique Gypsum Dune Fields

- *Minimize or reduce environmental effects that may impact park resources in order to protect and preserve the park in its current state.*
- *Educate users about how to protect the site through interpretive opportunities.*
- *Eliminate activities that threaten or interfere with resource preservation such as Easter activities involving confetti, which results in considerable litter on the dune fields.*

2. Richness of Flora and Fauna

- *Encourage biotic-related activities such as Earth Day events, new bird watching opportunities in the Cottonwood groves, and additional activities with flora and fauna focus.*

3. Archeological History and Prehistory Sites

- *Provide more opportunities to inform visitors about the cultural resources of the site.*
- *Create historical walking trails through park visitor center and housing focusing on programs interpreting history and architectural features of the site.*

4. Research and Education

- *Provide outreach to universities by creating research collaborations with WSNM, with emphasis on facilitating outside research on-site and research funding opportunities.*
- *Provide low-cost accommodations for researchers and aid in travel and logistics to remote and difficult-to-access areas of WSNM.*
- *Create opportunities for conferences, workshops and research symposia on-site.*

Appendix D: Summary of Recommendations continued

4. Research and Education continued

- *Create educational opportunities to share research findings to visitors on-site.*
- *Expand partnerships with children-related associations to enhance visitor experiences.*
- *Provide outreach to school districts, including creation of activities that complement curriculum learning objectives.*
- *Create more learning opportunities during school field trips.*
- *Coordinate grade-level learning with schools through park-based and online learning.*
- *Create a mobile display for community and school events to heighten interest about the park.*
- *Provide more opportunities for learning through junior ranger opportunities.*
- *Create a local initiative to visit the park by providing free passes for children with good grades and/or school attendance.*

5. Visitor Experience

- *Maintain the following facilities and activities noted as effective by stakeholders: the visitor center, large group recreation areas, parking, boardwalk, sunset strolls, full moon bike rides, dune sledding, Christmas Luminaria Event, star parties, and camping opportunities.*
- *Maintain buildings in good repair and utilize more sustainable practices on-site.*
- *Convert store room space near gift shop to visitor use; this space is perceived as being underused and may be better used as space for additional commercial visitor services.*

Appendix D: Summary of Recommendations continued

5. Visitor Experience continued

- *Provide opportunities in the visitor center that focus on immersion or interacting with displays rather than viewing.*
- *Increase awareness of visitor center and gift shop by providing greater orientation of these areas to visitors.*
- *Develop more opportunities to purchase food on-site and provide mobile vendors in dune fields during special events.*
- *Provide more parking or shuttle service during special events.*
- *Provide additional RV parking.*
- *Allow year-round alcohol consumption within the park.*
- *Provide more interpretive signage inside park, including signs for park hours at main entrance, and increase signage on the approach up to park.*
- *Develop more interpretive signage in dune field area, including additional areas along the boardwalk.*
- *Increase restroom capacity at the visitor center for large groups.*
- *Create additional shade adjacent to visitor center. Provide additional shade in the dunes area.*
- *Create a greater number of large group picnic areas that will accommodate 50 people or more.*
- *Increase number of volunteers and docents available for visitor needs.*
- *Extend park hours, have more free entrance times and reexamine the cost of the entrance fee.*
- *Create additional equestrian trails.*

Appendix D: Summary of Recommendations continued

5. Visitor Experience continued

- *Encourage more special events with potential themes:*
 - *Kite Flight day*
 - *Team- building courses for local businesses*
 - *Music festivals*
 - *New Mexico Museum of Space History night*
 - *Dawn hikes*
 - *Yoga and similar classes on the dune field*
 - *Photography/filming workshops*
 - *Graphic art events*
- *Explore development of possible biking trails between HAFB and WSNM to provide a recreational and transportation pathway between the two destinations.*
- *Increase visitor experience and relevance among diverse audiences to encourage new users to visit and enjoy the park.*
- *Encourage stronger relationship with Latino population through program development that targets this group and hire Spanish-speaking staff at White sands.*
- *Provide additional services for park users during missile testing closures by creating other opportunities to interpret and experience the park's significance during these times.*

Appendix D: Summary of Recommendations continued

6. Cooperation and Partnering Opportunities

- *Continue overall effective communication, relationships and cooperation with stakeholders (as noted through stakeholder input) at WSNM.*
- *Communicate more effectively information regarding RV parking and camping for scout groups and activities and volunteer activities available for visitors at WSNM.*
- *Provide activities and opportunities that will attract local residents to WSNM on a more regular basis.*
- *Meet with stakeholders and meet on a regular basis. Staff members of WSNM are encouraged to attend meetings conducted by key stakeholders.*
- *Disseminate information about WSNM at new recruit orientations at HAFB and WSMR.*
- *WSNM and WSMR collaborations should strive to:*
 - *Increase communication links with the Base Garrison.*
 - *Reestablish recovery protocol for unexploded ordinance.*
 - *Coordinate schedule for monument closures.*
- *Advertise WSNM events and opportunities more effectively:*
 - *Create a permanent column in Alamogordo newspaper (the Alamogordo newspaper does currently promote some events).*
 - *List events in local base newspapers.*
 - *Post events on base electronic information boards.*
 - *Advertise with flyers or notices.*

Appendix D: Summary of Recommendations continued

6. Cooperation and Partnering Opportunities continued

- *Advertise WSNM events and opportunities more effectively (continued):*
 - *Provide basic flyers for hotels.*
 - *Participate in Chamber of Commerce announcement of events in the “Chamber Chat”.*
 - *Establish a “Friends of WSNM” to provide additional support for the monument.*
- *Expand upon existing partnerships with:*
 - *HAFB and Raptor Lake: recreation, camping, and birding opportunities.*
 - *Asombro Institute.*
 - *New Mexico Museum of Space History: space camp, rocket events, and creation of an astronomy club sponsor.*
 - *Border Patrol and Otero County’s Sheriff’s Department: joint training and/or search and rescue missions.*
 - *WSMR: possibly realign the mutual boundary, benefiting both agencies.*
 - *Cuatrociénegas Park in Mexico, considered the sister park to WSNM.*